

CLAIMS

1. A method of communicating information in an optical burst
switched network, comprising the steps of:
transmitting multiple channels of information over an optical
transmission medium;
for each channel:
transmitting data bursts as series of one or more data slots;
transmitting groups of control headers in a control slot, each of said
control headers containing routing information for a data burst in the same
channel.
2. The method of claim 1 wherein each control header precedes its
associated data burst by at least a predetermined minimum time.
3. The method of claim 2 wherein each of the control headers
precedes its associated data burst by no more than a predetermined maximum
time.
4. The method of claim 1 wherein said data and control slots are
arranged in one or more superframes.
5. The method of claim 4 wherein a burst may span two or more
superframes.
6. The method of claim 4 wherein a control slot can be placed in an
arbitrary slot position within a superframe.
7. The method of claim 1 wherein, for a particular channel, control
slots are placed at regular intervals.
8. A router for communicating information in an optical burst
switched network, comprising:

circuitry for transmitting multiple channels of information over an optical
4 transmission medium, including, for each channel:
circuitry for transmitting data bursts as series of one or more data
6 slots; and
circuitry for transmitting groups of control headers in a control slot,
8 each of said control headers containing routing information for a data burst in
the same channel.

9. The router of claim 8 wherein each control header precedes its
2 associated data burst by at least a predetermined minimum time.

10. The router of claim 9 wherein each of the control headers precedes
2 its associated data burst by no more than a predetermined maximum time.

11. The router of claim 8 wherein said data and control slots are
2 arranged in one or more superframes.

12. The router of claim 11 wherein a burst may span two or more
2 superframes.

13. The router of claim 11 wherein a control slot can be placed in an
2 arbitrary slot position within a superframe.

14. The router of claim 8 wherein, for a particular channel, control slots
2 are placed at regular intervals.

15. A network of interconnected routers for communicating
2 information in an optical burst switched network, wherein one or more of the
routers comprise:
4 circuitry for transmitting multiple channels of information over an optical
transmission medium, including, for each channel:
6 circuitry for transmitting data bursts as series of one or more data

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slots; and

8 circuitry for transmitting groups of control headers in a control slot,
each of said control headers containing routing information for a data burst in
10 the same channel.

16. The network of claim 15 wherein each control header precedes its
2 associated data burst by at least a predetermined minimum time.

17. The network of claim 16 wherein each of the control headers
2 precedes its associated data burst by no more than a predetermined maximum
time.

18. The network of claim 15 wherein said data and control slots are
2 arranged in one or more superframes.

19. The network of claim 18 wherein a burst may span two or more
2 superframes.

20. The network of claim 18 wherein a control slot can be placed in an
2 arbitrary slot position within a superframe.

21. The network of claim 15 wherein, for a particular channel, control
2 slots are placed at regular intervals.

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